

## Sarcoptic mange (Scabies)

Sarcoptic mange is a skin disease that is caused by a mite – *Sarcoptes scabiei*. This mite is contracted from other dogs, foxes, and possibly coyotes who are infected with the mite. The mite burrows in the skin. The mite adults, immature forms and eggs spend most of their time in the skin. They may survive for short periods of time in the environment.

The dog's signs are caused by an allergic reaction to the mites. The allergic reaction manifests as severe itching primarily around the elbows, hocks (lower back legs), ventrum (underside), and ear flaps (especially margins). Due to self trauma, these dogs may have secondary crusting in these regions also. Since the signs are primarily due to an allergic reaction, very few mites are necessary to cause clinical signs. Therefore, sarcoptic mange is very difficult to diagnose. It is confirmed by skin scrapings. Since the mites causing sarcoptic mange are found less than 25% of the time, the diagnosis often is based on the distribution of lesions, severe itching, and resolution of signs in response to trial therapy for mites.

These mites that usually infect dogs (*Sarcoptes scabiei* var *canis*) can bite humans, and cause small red bumps, but do not survive on people. If lesions persist on humans, they should seek the advice of their physician.

There are a variety of treatments available for sarcoptic mange. Revolution (selamectin) is the only approved treatment for this mite. This treatment is applied topically on the back, is absorbed in to the blood, then spreads back out on to the skin. The mites in the skin then die. We use this medication 3-4 times (on day 1, day 14, day 28 and 1 month later) to treat for scabies. Bathing may decrease the effect of this medication, so it should only be done prior to application.

Two other treatments are used for more difficult cases. The first, LymDyp, is a sulfur based dip. It is very effective in the treatment of sarcoptic mange. This dip is used every 5-7 days for 6-8 dips. This solution should never be used straight out of the bottle, but must be diluted down. The dip must dry ON the pet. It is necessary to treat for the full length of time, or the mites infestation may relapse. Its drawbacks are the sulfur smell (rotten egg smell), temporary yellow discoloration of the hair coat and the dip may tarnish jewelry (wear gloves when handling wet dip).

The second treatment is ivermectin, which is also very effective for the treatment of sarcoptic mange. This is given by injection or orally. It is not licensed for use in dogs at this dosage, but is a widely used treatment for sarcoptic mange. It can not be used in Collies, shelties, border collies, Old English sheepdogs, or related breeds. Side effects (including personality change, dilated pupils, coma and death) may be seen in these breeds. These types of reactions are rare in other breeds. Pets must be heartworm negative prior to starting therapy with ivermectin.

All other dogs in the household, and who are in contact with the potentially infected dog must also be treated. Household treatment is recommended, although the ability of the mite to survive indoors is questionable at this time. This may need to be decided on a case by case basis.